

Notice of Allowability

Application No.

10/687,570

Examiner

Vikram P. Sundararaman

Applicant(s)

FREI ET AL.

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application No. 10/687,570 filed on October 15, 2003.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 10/19/2005, etc.
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


Charles A. Marmor II
SPE Art Unit 3735

DETAILED ACTION

Allowable Subject Matter

1. **Claims 1-18** are allowed.
2. The following is an examiner's statement of reasons for allowance:
 - a. As to Claims 1 and 8, the closest prior art of reference is Hargrove et al, US 2004/0002635 A1, hereinafter referred to as "Hargrove." Hargrove teaches a "method and apparatus for utilizing amplitude-modulated pulse-width modulation signals for neurostimulation and treatment of neurological disorders using electrical stimulation" – Title. Hargrove teaches receiving a plurality of neurological signals – Page 8, Paragraph 0098. The prior art also teaches the use of neurological signals to provide closed-loop therapeutic treatment of nervous system disorders. The prior art further teaches correction of lag times signal samples if they exist – Page 8, Paragraph 101. What the Hargrove and the prior art does not teach, however, is sequential sampling including the steps: (1) sampling first and second neurological signals at different times instances resulting in a time shift between the first and second neurological signal and further (2) time shifting signal samples of the second neurological signal to correct for the time shift so the second neurological signal is synchronized with the first neurological signal. The applicant specifically claims a method and apparatus for sampling first and second neurological signals at different time instances resulting in a time shift between the first and second neurological

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signal and further claims time shifting the second neurological signal so that it is synchronized with the first neurological signal.

b. Claims 2-7 are allowed, as they are dependent on independent Claim 1, which is allowed for the reason stated above.

c. Claims 9-18 are allowed, as they are dependent on independent Claim 8, which is allowed for the reasons stated above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Fehmi et al., US 3,978,847;
- b. Owen, US 2005/0028579 A1;
- c. Bridger et al., US 6,887,199 B2; and
- d. Tarjan et al., US 5,817,030.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikram P. Sundararaman whose telephone number is 571-272-3351. The examiner can normally be reached on M-F, 830 am-5:00 pm.

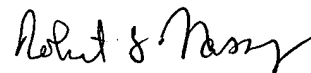
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on 571-272-4730. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vikram P. Sundararaman
AU 3735



ROBERT L. NASSAR
PRIMARY EXAMINER